REMARKS

Status of the Claims

Claims 40-55, 69-72, and 81-85 are presently pending. Claim 53 has been cancelled. By this Amendment, Applicants have amended claims 40-43, 45-46, 48-52, 54-55, 69, 81, and 84, including grammatical corrections. Applicants have introduced new claim 85. Support for the new claim and amendments can be found in the originally filed specification, for example at page 4, lines 15-21; page 5, lines 14-19; page 6, lines 24-26; page 16, lines 20-21; page 23, lines 11-21; and page 26, line 17 to page 28, line 28. No new matter has been added.

Election of Species

Applicants respectfully submit that the election of species requirement is moot in view of the amended claims. In particular, claim 46 has been amended to depend from independent claim 40, which is not subject to the election requirement. Claims 47 to 29 and 51 depend from claim 46, and claim 50 depends from claim 47, thus removing them from the election requirement as well. Amended claims 46 to 51 further define the hydrogel composition of claim 40 and relate to a single general inventive concept pursuant to PCT Rule 13.1. Accordingly, Applicants respectfully request withdrawal of the election requirement and request that all the claimed species of hydrophilic polymer of different monomers continue to be examined in this application.

Rejection under 35 U.S.C. §103

The Examiner has rejected claims 40-46, 49, 51-55, 69-72, and 81-84 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,136,873 to Hahnle et al. (hereinafter "Hahnle") for the reasons set forth at pages 3-6 of the Office Action. Applicants traverse the rejection for at least the following reasons. Claims 53 has been cancelled, thereby rendering its rejection moot.

Hahnle relates to water-absorbing, expanded, crosslinked foamed polymers and methods for producing them. The Examiner has admitted that there is no specific disclosure in *Hahnle* of a hydrogel composition having two distinct portions, and specifically two portions with the claimed characteristics, such as thickness or cell void volume, etc. *See id.* at page 5. However, the Examiner has suggested that the Examples of *Hahnle* would produce a two-part hydrogel composition because the Examiner considers the process in *Hahnle* to be "substantially identical" to those in the present application. *Id.* Applicants respectfully disagree.

Hahnle teaches that the liquid foam mixtures from which its foamed hydrogel compositions are formed are very stable, i.e., not prone to losing their foamed structures. *See* col. 10, lines 55-62 and col. 12, lines 3-8. For instance, *Hahnle* teaches that "an essential advantage of the production...[is obtaining] foamed, polymerizable aqueous mixtures which are stable over a lengthy period, e.g., up to 6 hours, so that they can be handled without problems, for example." *See* col. 10, lines 55-62 (emphasis added). *Hahnle* also teaches that "a considerable advantage of the process...[is that] the polymerization takes place with substantial retention of the structure of the foamed

polymerizable aqueous mixture, i.e., the volume of the polymerizable foam changes negligibly during the polymerization." *See* col. 12, lines 3-8.

One skilled in the art would therefore understand that the liquid foams produced in *Hahnle* are stable for extended periods of time, i.e., not prone to collapsing and losing their foamed structures before they are polymerized, and would understand that the structure of the liquid foams is retained on polymerization. Thus, one skilled in the art would expect the foams produced in *Hahnle* to be substantially uniform, i.e., lacking a portion or layer having relatively continuous internal structure, as presently claimed.

Furthermore, Applicants point out that *Hahnle* fails to teach or suggest any part of its disclosed hydrogels, or the liquid foams from which they are produced, being unfoamed. In fact, for each Example therein, an aqueous mixture containing various components is foamed and then transferred to a mold, yet there is no disclosure of any delay between transferring the foamed aqueous mixture to the mold and initiating the polymerization of the monomer components in the liquid foam. *See* col. 15, line 60 to col. 20, line 8. In view of the very stable nature of the liquid foams in *Hahnle*, one of ordinary skill in the art would not expect a sudden redistribution of the gas bubbles within the foamed liquids and, consequently, would expect that the resultant foamed hydrogels would be substantially homogeneous (i.e., with gas bubbles distributed throughout the hydrogel composition.) *See* attached Declaration of Hugh Semple Munroe.

In contrast, the presently claimed compositions recite a hydrogel composition comprising, *inter alia*, a first portion or layer and a second portion or layer. For instance,

when the foamed liquid pre-gel compositions in the Examples are poured onto a substrate, gas bubbles in the lower part of the liquid composition (e.g., those nearest to the substrate) rise toward the surface of the liquid. This produces a relatively continuous lower portion or layer and an upper portion or layer that contains gas bubbles – that is, it produces a two-part structure. The separation into the two-part structure is termed "draining" in the present disclosure at page 23, lines 6-9. When the pre-gel composition is polymerized, the two-part structure is retained in the resultant hydrogel composition. This is explained in the present disclosure at page 23, lines 6-9, and in the paragraph linking pages 36 and 37.

Furthermore, regarding claim 52, the claim relates to a process for the preparation of a porous hydrogel composition from a polymerizable mixture that includes bubbles consisting predominantly of air. *Hahnle* discloses that the "mechanical generation of a foam is preferably carried out in an inert gas atmosphere," and provides examples of inert gases that can be used, such as "nitrogen, the inert gases, and carbon dioxide." *See* col. 10, lines 25-28. Most notably, all of the disclosed gases do not contain oxygen, which is a reactive gas and may be expected to be detrimental to a free-radical reaction. The reference therefore teaches away from using a non-inert gas, such as an oxygen-containing gas (e.g., air). In view of this teaching, it is not at all obvious that the process as claimed in claim 52 can be carried out on a commercial scale using air (i.e., an oxygen-containing gas).

For at least the above reasons, a *prima facie* case of obviousness does not exist. Accordingly, the present invention is not obvious in light of *Hahnle*. Reconsideration and withdrawal of the rejection are respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims. This is believed to be a complete and proper response to the Examiner's Office Action.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 50-2961.

Respectfully submitted,

Dated: December 9, 2008

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